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ABSTRACT

The measurement of value added (MVA) is a powerful tool that can help British further education colleges improve student and program performance. MVA can focus on individual learners, sectional management issues, and presentation of colleges' achievements to external audiences. MVA may be used for the following purposes: improving guidance and selection, better identifying learning support needs, reviewing and target setting, managing for quality improvement, marketing the college, and maintaining public accountability. A number of issues must be resolved before further education colleges can justify taking action on the basis of MVA. The major issues in the debate surrounding MVA are the degree of correlation between input and output data and the extent to which dissimilar data can be aggregated while still permitting sound conclusions to be drawn. Despite these issues, further education colleges and national bodies have expressed extensive interest in developing the MVA. The best use of MVA has been found to occur when the validity of findings is examined critically, crude comparisons between performance in different subjects are avoided, and systems are introduced and conclusions expressed in ways that are likely to motivate learners and staff to improve rather than to exclude them. (MN)

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Value added: an update

FEU's bulletin, *Value Added in Further Education* (1993) explains the concept of value added and why there is currently so much interest in it.

Background

The requirements on colleges to provide information for publication about students' achievements has resulted in increased interest in the development of value added measures. Some indicators, such as league tables of examination results, make no reference to students' starting points and, as a result, many would argue, make unfair comparisons between, say, selective sixth forms and colleges with policies of maximising participation. Value added measures are seen as potentially fairer indicators of performance.

Various approaches to measuring value added for GCE A levels exist (e.g. ALIS, the *Guardian*, the Audit Commission, Greenhead, as well as colleges' own systems). While they have significant variations, all compare achievement at entry (GCSE results translated into a points score) with that at exit (points score based on A-level results). Thus, the distance travelled by any individual can be calculated. Once this has been done, the individual scores can be aggregated over time and across institutions and national norms calculated, against which individuals or groups can be compared.

Using value added measures

Potentially, value added measures have many uses for colleges. Some focus on individual learners, some on sectional management issues and others on the presentation of colleges' achievements to external audiences. Examples include:

Improving guidance and selection. Value added measures can provide an indication of students' chances of success. This information can be used to guide them to an appropriate choice of course.

Better identification of learning support needs. Such evidence can also be used to help identify learning support needs for students who might otherwise experience difficulties.

Reviewing and target setting. Students' actual achievements throughout their programme can be compared with value added norms. Realistic targets can be set and support provided for under-achievers.

Managing for quality improvement. Value added measures can be used at subject or section level to compare performance year on year and with national norms. They may indicate that further thought and action are needed to improve performance. For example, the data may show that more value is added for boys than for girls. This might lead staff to reconsider the learning strategies employed.

Marketing the college. Colleges may wish to publicise their achievements to prospective customers in terms of value added measures.

Public accountability. If national systems were to be developed, value added measures might be used to demonstrate value for money at college level or for the FE sector as a whole.

Thus, the measurement of value added has considerable potential as an internal quality management tool, as well as for public accountability purposes.

Major issues still be to resolved

Technical/statistical issues

This is a complex and contentious area. Essentially the debate is about the statistical rigour required to justify taking action on the basis of measurements of value added.

Statistical findings indicate probabilities, not certainties. Small absolute differences may therefore not be significant, especially where small numbers of students are involved. The extent to which previous attainments can be used to predict achievements varies considerably between different programmes. A method which is valid for one programme, such as that which measures progress from GCSE to GCE A level, may not be valid for or transferable to other areas of the curriculum. The **degree of correlation** between input and output data is thus an important consideration.

The extent to which sometimes dissimilar data can be **aggregated** while still permitting sound conclusions to be drawn is another area of contention. ALIS, for example, publishes norms only for single subjects, whereas the *Guardian* (30 November 1993), while aggregating to institutional level, stressed that the statistically significant differences between schools and

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colleges were far smaller than might appear to be indicated by their respective individual placings on a simple league table.

There may be no simple way to resolve these issues. However, it is important to recognise that the lower the correlation and/or the greater the degree of aggregation, the more care must be taken in drawing conclusions from the data. Similarly any subsequent action taken on the basis of such conclusions must be approached with caution.

The use of value added measures within colleges

While the measurement of value added has considerable potential in terms on its use in colleges, it is but one imperfect indicator. It is important to use value added sensitively, remembering that its purpose is to improve performance whether at individual, section or college level.

Best practice seems to be when:

- the validity of findings is examined critically e.g. findings based on one year's data for a small number of students are treated with caution;
- crude comparisons are not made between performance in different subjects. This is because, at national level, the average grades achieved in different subjects vary significantly;
- systems are introduced and conclusions expressed in ways that are likely to motivate learners or staff to improve rather than to demotivate or exclude.

The most effective practice FEU has encountered has been where course or subject teams have been able to make practical use of the data, even though the collection and analysis of data may have been undertaken centrally at college or multi-institutional level. In these cases, value added has been calculated for a subject and given to the staff team which has then had responsibility to:

- receive and discuss the data;
- identify any patterns, e.g. over time value added has increased/decreased, value is added more to weaker students than to stronger, to girls more than boys, etc;
- consider reasons for the patterns e.g. changes in selection criteria, changes in teaching and learning strategies;
- recommend what, if anything, to do differently;
- report on action to be taken;
- decide how to evaluate action.

Sometimes such practices are seen as part of normal monitoring, review and evaluation procedures. When this is the case, any difficulties can often be identified and rectified at team level and value added measurement can be seen as a helpful tool to aid continual improvement.

Vocational programmes and value added

The measurement of value added in respect of vocational courses is more problematic. Technically this is because the correlation between GCSE scores and success on vocational programmes is weaker than for GCE A levels. It is thus more difficult to draw valid conclusions from the data.

Despite this, FEU's recent national survey of value added showed that, in the 207 colleges that responded, GCSE scores were by far the most commonly used input data for Advanced GNVQ courses.

Health warning: any value added system using GCSE scores and/or scores based on equivalences for level 2 vocational qualifications as input data, and scores based on vocational equivalences to GCE A levels as output data, should recognise the technical limitations of the data generated. In particular, great care should be taken neither to draw unwarranted conclusions or comparisons, nor to take action without other supporting evidence.

Conclusions

The measurement of value added is a powerful tool that can help colleges improve performance in a number of different ways. Nonetheless, it is only one quality indicator and cannot be applied to all circumstances. Its limitations need to be acknowledged and taken into account in the way it is used. Despite this, there is widespread interest among colleges and national bodies in developing the measurement of value added further. In particular, there is a commitment to the identification of alternative or additional input data to GCSEs for vocational courses. FEU, in conjunction with the FEFC(E), is planning to carry out some feasibility studies of likely alternatives which can then be trialled more extensively. FEU will also be developing more detailed guidance on how to use value added measurement effectively in colleges.

Contact

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